# COLORADO DEPARMENT OF PUBLIC HEALTH AND ENVIRONMENT WATER QUALITY CONTROL COMMISSION

#### **REGULATION NO. 75**

#### CHERAW LAKE CONTROL REGULATION

5 CCR 1002-75

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#### **REGULATION NO. 75**

#### 75.0 CHERAW LAKE CONTROL REGULATION

#### 75.1 <u>AUTHORITY</u>

Section 25-8-205, C.R.S.

#### 75.2 REGULATION

- (1) There shall be no controlled release of water from Cheraw Lake unless one of the following conditions can be met:
  - (a) The salinity of the water released, measured as total dissolved solids (TDS), is less than or equal to 4300 parts per million (ppm); or
  - (b) An adequate quantity of water of less saline nature can be supplied for dilution purposes such that a salinity level of 4300 ppm, measured as TDS, can be maintained in Horse Creek immediately above the first diversion below the confluence with the Cheraw Lake outlet channel.
- (2) The entity effectuating the release from Cheraw Lake shall have the responsibility for monitoring for the purpose of demonstrating compliance with this regulation.
- (3) The provisions of this regulation are severable, and if any provisions or the application of the provisions to any circumstances is held invalid, the application of such provision to other circumstances, and the remainder of these regulations, shall not be affected thereby.

#### 75.3 - 75.9 RESERVED

A copy of the map may be obtained by contacting the Water Quality Control Commission, WQCC-A5, 4300 Cherry Creek Dr. S., Denver, CO 80246-1530, or by calling 303-692-3469.

#### 75.10 <u>STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE</u>

The provisions of sections 25-8-202(1)(c) and (2); and 25-8-205; C.R.S., provide the specific statutory authority for adoption of the attached control regulation. The Commission also adopted, in compliance with section 24-4-103(4) C.R.S., the following statement of basis and purpose.

#### BASIS AND PURPOSE:

The purpose of this regulation is to protect the agricultural uses of water in Horse Creek (Otero and Bent Counties) from the highly saline discharges from tributary Cheraw Lake, while also avoiding an unacceptable adverse impact on other downstream water uses, particularly domestic water supplies.

The regulation takes into account the intermittent nature of any discharges from Cheraw Lake, and the possibility that any discharge could be diluted before the water reaches Horse Creek. The regulation does not impose any specific treatment or best management practice requirements. Rather, it provides flexibility regarding the means of compliance, so long as the specific level of salinity can be achieved in Horse Creek.

The saline condition of water in Cheraw Lake appears to be caused by highly alkaline native soils in the area together with routing of irrigation return flows to the lake. Traditionally, topography and the shortage of water in the Arkansas River Basin has prevented the lake from overflowing into Horse Creek. Evaporation losses then contributed to the increase in salinity which has exceeded 17000mg/l (TDS) in the upper layer and 60000mg/l at the bottom of the lake based on samples collected by the Division and the USGS. The excess of water caused by the past "wet" years has caused levels in the lake to rise significantly which, in turn, threatened to cause property damage to State Highway 109 and the Town of Cheraw. This led several parties to effect releases from the lake which have damaged and endangered the agricultural use downstream on Horse Creek. This statement is supported by the EPA "Red Book" criteria for irrigation water and Division and USGS water quality investigations of the Lake and Horse Creek.

The ambient quality of Horse Creek has exceeded 5000 ppm TDS without influence from Cheraw Lake based on the existing water quality database. Since the agricultural use of Horse Creek water was not impaired under those conditions, salinity levels of Horse Creek will be controlled based on the 85th percentile of 65 USGS measurements of specific conductance prior to the 1985 releases from Cheraw Lake. This value was then converted to TDS using a linear regression developed by USGS and Division staff. The calculated TDS standard is 4300 mg/l.

## 75.11 <u>STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE;</u> <u>JULY, 1997 RULEMAKING</u>

The provisions of sections 25-8-202 and 25-8-401, C.R.S., provide the specific statutory authority for adoption of the attached regulatory amendments. The Commission also adopted,

in compliance with section 24-4-103(4) C.R.S., the following statement of basis and purpose.

#### **BASIS AND PURPOSE**

The Commission has adopted a revised numbering system for this regulation, as a part of an overall renumbering of all Water Quality Control Commission rules and regulations. The goals of the renumbering are: (1) to achieve a more logical organization and numbering of the regulations, with a system that provides flexibility for future modifications, and (2) to make the Commission's internal numbering system and that of the Colorado Code of Regulations (CCR) consistent. The CCR references for the regulations will also be revised as a result of this hearing.